

Amendments to the Claims:

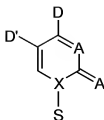
This claim listing will replace all prior versions and listings of claims in the application:

Claim Listing:

- 1-19. (Cancelled)
20. (Currently amended) An immunostimulatory oligonucleotide compound, comprising:
an immunostimulatory dinucleotide of formula C*pG, C*pG* or CpG*, wherein C is a natural pyrimidine nucleoside, C* is a non-natural pyrimidine nucleoside, G is a natural purine nucleoside and G* is a non-natural purine nucleoside, wherein when the immunostimulatory dinucleotide is C*pG, then C* is selected from 5-hydroxycytosine, 5-hydroxymethylcytosine, N4-alkylcytosine and 4-thiouracil, and wherein p is an internucleotide linkage selected from the group consisting of phosphodiester, phosphorothioate and phosphorodithioate;

a 3'-3' linkage; and

one or two accessible 5' ends.
21. (Original) The immunostimulatory oligonucleotide compound of claim 20, which oligonucleotide comprises two accessible 5' ends.
- 22.-40. (Canceled)
41. (Previously presented) The immunostimulatory oligonucleotide compound of claim 20, wherein G* is 7-deazaguanosine.
42. (Currently amended) An immunostimulatory oligonucleotide compound, comprising:an immunostimulatory dinucleotide of formula C*pG, wherein C* is a non-natural pyrimidine nucleoside having formula (I):



(I)

selected from 5-hydroxycytosine, 5-hydroxymethylcytosine, N4-alkylcytosine, and 4-thiouracil; wherein D is a hydrogen bond donor, D' is selected from the group consisting of hydrogen, hydrogen bond donor, hydrophilic group, hydrophobic group and electron donating group, A is a hydrogen bond acceptor or a hydrophilic group, X is carbon or nitrogen, and S is a pentose or hexose sugar ring, provided that the pyrimidine nucleoside of formula (I) is not cytidine or deoxycytidine, and G is a natural purine nucleoside, and wherein p is an internucleotide linkage selected from the group consisting of phosphodiester, phosphorothioate and phosphorodithioate;

a 3'-3' linkage; and

one or two accessible 5' ends.

43-45. (Canceled)

46. (Currently amended) The immunostimulatory oligonucleotide compound of claim 43 42, wherein the non-natural pyrimidine nucleoside of formula (I) comprises a non-naturally occurring sugar moiety.

47. (Previously presented) The immunostimulatory oligonucleotide compound of claim 46, wherein the non-naturally occurring sugar moiety is arabinose.

48-51. (Canceled)